tween the ingoing sensory fibres and the outgoing motor fibres are involved in the production of the phenomenon called the reflex, the authors have experimentally shown that in frogs and mammals the reflex-transfer takes place in the cervical portions of the spinal cord, and perhaps also partly in the medulla oblongata.

After having determined the minimum amount of the irritation just sufficient to produce a definite reflex, sections were made at different levels of the cord and the alterations noted. It was found that the integrity of the connection of the upper cervical cord, immediately beneath the calamus scriptorius, with the sensory and motor paths was indispensable for the production of the reflex. If this region of the cord be destroyed the former effective minimal stimuli no longer produce the reflex. If their strength be increased the stimuli find other paths to the origins of the motor nerves

It therefore appeared probable to the authors that in cases presenting lesions of the bulbo-cervical region the reflexes below would be either abolished or very much diminished. In diametrical opposition to this view was the teaching that separation of the cord from the medulla occasioned an exaggeration of the reflex.

At that time (1875) the only reported cases were those of Kadner, Weiss, Kahler and Pick, in which transverse injury in the upper cord caused abolition of the reflexes below the lesion. Since 1882, when the authors renewed their investigations, other cases were put on record in which complete transverse lesion of the cord was followed by flaccid paralysis of the lower extremities with abolition of the tendon, skin and visceral reflexes (Bastian, Bowlby, Thorburn, Babinski, Bruns, Gerhadt, Hitzig, Egger, Hoche, Habel, Van Gehuchten), in spite of absolute integrity, microscopically determined, of the lumbo-sacral regions of the cord.

Another significant fact is that in no case recorded of complete transverse division of the cord did the tendon, visceral and skin reflexes persist.

It appears therefore that the clinical observations are in accord with the experimental in placing the reflex centre in the bulbo-cervical portion of the cord. MEIROWITZ.

63. EXPERIMENTAL OBSERVATIONS ON THE CROSSED ADDUCTOR JERK. P. Stewart (Journal of Physiology, 22, 1897, p. 61).

As the result of the author's observations on a case in which the phenomenon of crossed knee jerks was obtained the following conclusions were offered:—

1. That the crossed adductor jerk is not due to direct stretching of the adductor muscles by a shock communicated to the pelvis.
2. That the crossed adductor jerk is not due to a shock mechanically transmitted to the spinal cord.
3. That the crossed adductor jerk is a true reflex, occurring at a period distinctly later than the ordinary knee jerk.
4. That the average time required for the appearance of the crossed adductor jerk is about .126 of a second from the time when the opposite tendon is tapped. JELLIFFE.

## PATHOLOGY.

64. NOTE ON MUSCLE-SPINDLES IN PSEUDO-HYPERTROPHIC PARALYSIS. A. S. Grünbaum (Brain, 20, 1897, p. 365).

The author gives a short note of his findings in a case of pseudohypertrophic paralysis. He says the muscle-spindles were for the most part unaffected, but in a few there was a diminution in size of an intra-fusal fibre with a deposit of hyaline material around. The ordinary muscular, nervous and vascular changes were also present.

JELLIFFE.

65. NOTE SUR LEX RÉFLEXES FÉMORAUX CROISES CHEZ LES ÉPILEPTIQUES (On Crossed Femoral Reflexes in Epileptics.) Ch. Féré (Comptes rend. Soc. de Biologie, 5, 1898, p. 7).

An examination by the author of some 143 non-paralytic epileptics, examined in a period when but few were deeply under the influence of bromides, revealed the presence of this phenomenon in twenty-four instances. The author presents the following table:—

| | Patellar Reflex. | Crossed Femoral Reflex. |
|---|---|---|
| Feeble | 35 | — |
| Medium | 64 | 8 |
| Strong | 44 | 16 |
| Total | 143 | 24 |

The variety of the crossed reflex varied; in 16 cases the r. adductor, in 3 the r. extensor and in 3 both muscles showed the phenomena. In general, the crossed femoral reflex was equal on both sides, save in one case, where the right side predominated.

Bromides seemed to have no influence upon either the patellar reflex or crossed femoral reflex. VOGEL.

## CLINICAL NEUROLOGY.

66. La SCOMPARSA DEL RIFLESSO DEL TENDINE ACHILLEO NELL SCIATICA (Tendon Reflexes in Sciatica) J. Babinski (Gazz. d. Ospedali, 18, 1897, p. 29).

In a note the author shows that, whereas in healthy individuals the tendon-reflex is normal, in sciatica there is usually a diminution or a loss of such tendon-reflex. This phenomenon was found not only in severe cases of the disease, but also in much lighter forms, as ischialgia. In some cases there were marked differences in the reflexes on opposite sides of the body.

The author considers this a valuable diagnostic sign, especially to differentiate simulation from hysterical sciatica. It is not clear, however, that incipient tabes is ruled out in this report. JELLIFFE.

67. LE REFLEXE ROTULIEN DANS LA SYPHILIS (The Knee-Jerk in Syphilis.) Valentine Zaroubine (Jour. de Conn. Méd., March 11, 1897).

The author found the knee-jerk exaggerated in all syphilitic patients during the secondary stage. Following this increase, the excitability often fell and then regained its normal state.

MACALESTER.

68. CASES OF PSEUDO-HYPERTROPHIC PARALYSIS AND OTHER FORMS OF PROGRESSIVE MUSCULAR DYSTROPHY. Bryom Bramwell (Atlas of Clinical Medicine, iii., 1897, p. 95).

In an elaborate report the author presents the clinical histories of fifteen cases of pseudo-hypertrophic paralysis and one case of myopathic muscular atrophy affecting the face, tongue, ocular muscles, muscles of the head, neck, shoulder girdle and upper extremities.

In about five cases detailed microscopical examinations were made of the muscles, the peripheral nerves and the spinal cord.